

Changes Approved 3/21/05 YJZ

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STUCK-AT SCAN CHAIN DIAGNOSTIC METHOD

ABSTRACT

While data cannot be transmitted down a scan chain through a stuck-at fault location, data in properly operating latches downstream of the stuck-at fault location can be shifted down the chain. By varying operating parameters, such as power supply and reference voltages, clock timing patterns, temperature and timing sequences, one or more latches down the SRL chain from the stuck-at fault location may be triggered to change state from the stuck-at fault value. The SRL chain is then operated to shift data out the output of the SRL chain. The output is monitored and any change in value from the stuck-at state is noted as identifying all good latch positions to end of the chain. The process is repeated: varying each of the selected operating parameters until the latch position following the stuck-at fault latch is identified.

Please replace the Abstract on page 12 with the following amended abstract:

STUCK-AT SCAN CHAIN DIAGNOSTIC METHOD

ABSTRACT

While data cannot be transmitted down a scan chain through a stuck-at fault location, data in properly operating latches downstream of the stuck-at fault location can be shifted down the chain. By varying [[an]] operating parameter_A, such as power supply and reference voltages, clock timing patterns, temperature and timing sequences, one or more latches down the SRL chain from the stuck-at fault location may be triggered to change state from the stuck-at fault value. The SRL chain is then operated to shift data out the output of the SRL chain. The output is monitored and any change in value from the stuck-at state is noted as identifying all good latch positions to end of the chain. The process is repeated; varying each of the selected operating parameters [[with]] until the latch position following the stuck-at fault latch is identified.